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THE

AMERICAN PRACTITIONER:

Formerly "Western Journal of Medicine."

A MONTHLY JOURNAL OF

MEDICINE AND SURGERY.

EDITED BY

DAVID W. YANDELL, M. D.
Professor of Clinical Surgery in the University of Louisville,

AND

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LOUISVILLE, KY:
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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Vol. I. LOUISVILLE, JANUARY, 1870. No. 1.

ON THE BROMIDE OF POTASSIUM IN SACCHARINE DIABETES.

BY AUSTIN FLINT, M. D.,

Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College.

On the 26th of November, 1868, I was consulted by Mr. H., aged about forty, a resident in the western part of this state. The existence of saccharine diabetes had been known for the previous two years, and for a year before his disease was ascertained he had noticed that the urine was more abundant and his thirst greater than usual. He had consulted several physicians. The treatment, medicinally, had consisted for the most part in the use of alkalies. He had adopted pretty fully and continued steadily an anti-diabetic diet. Impotence had existed for a year and a half, sexual desire as well as competency having been wanting. His aspect was not notably morbid; he had considerable color. His weight was forty pounds below his maximum of health, having been reduced from two hundred to one hundred and sixty pounds.

For several months he had held his own as regards weight and strength, and the quantity of urine was less than it had been. The appetite and digestion were good. He did not find the withdrawal of sugar from his diet a hardship. He had tried Camplin's substitute for bread, and found that it did not agree with him, and he limited himself to a small quantity of toasted bread. Aside from the evidence of glucohæmia and impotence he did not appear to have any disease.

The patient stated to me that some one had suggested to him to take the bromide of potassium, and he asked my opinion of this remedy in his case. I said to him that I had no knowledge of this drug as a remedy for diabetes; but, in view of its action on the nervous system, I thought the suggestion a good one, and advised him to take twenty grains three times daily. I desired him to send me a specimen of his urine, and to ascertain the quantity passed in twenty-four hours. I received a letter from him dated December 7, 1868, stating that his urine had decreased from two quarts to three pints. He sent me a specimen, which was found to contain sugar by Fechling's test, and to have a sp. gr. of 1.040. Of the effect of the bromide of potassium he writes as follows: "I have continued the bromide of potassium very regularly; I find it very soothing to the nervous system, inclining me to sleep very sweetly, and inordinately for me. Heretofore six or seven hours were all that I could spend in bed; now I retire at ten o'clock and sleep soundly until six; then I arise, urinate, and sleep again until eight or half-past eight o'clock. It is refreshing sleep too; that is, I feel rested after the last indulgence." In my answer to this letter I advised him to continue the use of the remedy.

This patient called upon me February 26, 1869. He reported much improvement in all respects except as regards the sexual function. The urine hardly exceeded in amount that of health. The sp. gr., taken by himself, was 1.038.

His aspect was better. His appetite was good, and he had no unusual thirst. He had continued the bromide of potassium, and the same diet as when I first saw him. The bowels were constipated, and for this I prescribed a dinner-pill. I advised a continuance of the bromide of potassium.

Under date of March 19, 1869, the patient wrote as follows: "I think I am slowly but certainly on the gain. The sp. gr. of the urine to-day is under 1.029, and the amount passed per day is not above three pints. I am feeling better; my mind is clearer, and my strength improving." He, however, had not improved as regards the sexual function, and he desired a remedy with reference to this function. I advised to continue the bromide, and I added Horsford's acid phosphate.

April 20, 1869. Under this date he reported by letter continued improvement in every respect excepting the impotence. An involuntary nocturnal emission at night on one occasion was the only evidence of any activity of the sexual function. In answer to his letter I substituted a prescription for the phosphide of zinc to take the place of Horsford's acid phosphate.

Early in May, 1869, Mr. H. wrote to me that he was about to take a trip to California, and I have had no further report from him of his condition.

The bromide of potassium seemed to have an excellent effect in this case as regards the diabetic affection, and I was therefore led to advise its use as long as the patient considered himself under my care, notwithstanding the ground for suspecting that the remedy may have stood in the way of the return of sexual desire. The case would be more valuable if the opportunity were offered of observing its progress after suspending the use of the remedy. Since this case came under my observation I have advised the use of the bromide in two cases, a brief account of which I will subjoin.

A male patient, aged about thirty-five, was admitted into Bellevue Hospital in July, 1869. He first noticed diuresis and thirst six months before his admission. During this time he had lost in weight sixty pounds. The quantity of urine varied from fifteen to twenty-one pints in the twenty-four hours, the sp. gr. being generally 1.030. The skin was hard and dry, with considerable purpuraceous desquamation. There was loss of sexual desire, which had previously been rather strong. After his admission articles of diet containing sugar and starch were measurably, not rigidly, excluded. Under the use of the bromide of potassium the urine was diminished; he reported feeling better, and his weight did not decrease. In the space of about three months the bromide was suspended for a week as a matter of observation. The urine increased, and he reported not so well. It was then resumed, and he improved as regards the diuresis and a feeling of more strength. At the end of about three months he left the hospital.

The other case is at the present time under my observation. The patient is an energetic business man, aged thirty. During the past summer, while spending some weeks in the country, he noticed that he urinated more frequently and abundantly than usual, and that he had an unusual thirst. In all other respects he was apparently perfectly well, and he had no idea that these symptoms denoted any disease. After a time he found that he became more fatigued by exercise than previously, and his friends observed that he was growing thin. He was led to consult a homœopathic practitioner, who gave him some remedies and advised him to live generously. Finding that he continued to lose strength and weight, he consulted Dr. Lutkins, of Jersey City, who referred him to me. I saw him October 26, 1869; his aspect was healthy, and he hardly considered himself an invalid, continuing his active duties in business. He was about fourteen pounds under his average weight. He passed about ten pints

of urine in the twenty-four hours; the sp. gr. of the urine was 1.040. Trommer's test showed the presence of sugar in abundance. His appetite was good, and there were no dyspeptic ailments. The skin was dry. He had made no alteration in his diet, and diabetes had not been suspected prior to his consulting Dr. Lutkins. I placed him upon an anti-diabetic diet, and prescribed the bromide of potassium in doses of gr. xv, three times daily. There was slight diminution of sexual desire in this case.

November 1st. The patient reported great improvement. The quantity of urine per day and the number of acts of micturition were not greater than in health. He had no unusual thirst. The sp. gr. of the urine was 1.030. He did not find it a hardship to conform to the dietetic restrictions. The bromide was continued.

November 9th. He reported that he passes only from two to three pints of urine daily; he was not conscious of being in any respect ill. The bromide was continued.

November 17th. He again reported that he would not know that he was otherwise than perfectly well. The sp. gr. of the urine was 1.024. Trommer's test, however, showed the presence of sugar. He complained of feeling sleepy during the day. The bromide was discontinued.

November 26th. He reported as well as on the preceding date. The sp. gr. of the urine, however, was a little higher, namely, 1.028.

The last case is remarkable for the very rapid and great improvement; but it is by no means as yet certain that the improvement is not chiefly or entirely due to the dietetic management. The case affords a striking example of the tolerance of an anti-diabetic diet. The patient, in addition to all kinds of meat, inclusive of fish, oysters, and eggs, is allowed celery, lettuce, onions, cauliflower, tomatoes, and sour apples. The last-named article, eaten raw and roasted, he

finds a very good substitute for potatoes. He takes tea and coffee with cream. He eats butter freely. A small quantity of toasted bread is allowed. Camplin's bran-bread he found unpalatable. With this bill of fare he is thus far perfectly satisfied to give up sugar, and, with the exception of a little bread, all articles abounding in starch. A little sherry or claret wine is not interdicted.

My object in giving an account of these cases is not to claim in behalf of the bromide of potassium a special curative agency in saccharine diabetes; but to suggest to physicians to make trial of this remedy, in order to determine whether it be not entitled to be classed with other remedies which are sometimes useful. In the first of the three cases its usefulness was apparently clearly manifested.

NEW YORK, November 27, 1869.

THE TREATMENT OF URETHRAL STRICTURE BY INTERNAL URETHROTOMY AND RUPTURE.*

BY FREEMAN J. BUMSTEAD, M. D.,

Professor of Venereal Diseases at the College of Physicians and Surgeons, New York.

I shall consider these two methods under one heading, partly for the sake of convenience, and partly because in many instances it makes but little difference which is employed.

During the last five years I have made use of rupture and internal incision in the majority of cases of stricture that have come under my care in hospital and private practice,

* Some of the views advanced in this paper have already been given in the American Journal of the Medical Sciences for October, 1868.

having been led in a measure to adopt this course from a desire to test these methods, and being almost driven to it in the cases of patients from a distance, whose stay in the city was necessarily limited. Contrary to my preconceived opinion, the result has been eminently satisfactory, and I am induced to believe that the treatment of stricture can be carried on with as much safety, that better results can be obtained, and that much valuable time can be saved by other methods than dilatation.

I would say as regards the safety that no death has occurred in my practice, although many of the patients at the hospital have been of the most unfavorable class to operate upon; in one case only was there any serious cause for alarm arising from suppression of urine, which lasted for two or three days. Urethral fever of moderate intensity has not been uncommon, but the great majority of cases have gone on without any untoward symptom, or at most with one or two insignificant chills, such as often follow the mere passage of a sound or bougie, and indeed many patients have suffered much more after previous attempts at catheterism than from the subsequent operation.

It is unreasonable, however, to require that so great immunity should always exist; there is danger attending all operations, and the rupture and incision of stricture are not exceptions. Several deaths have been reported from the use of Mr. Holt's instrument, and others have occurred from internal urethrotomy. I know of one of the latter which happened in the practice of one of our most distinguished surgeons, some eighteen years ago. The patient belonged to a prominent family, and this was the surgeon's first case of stricture after his return from Paris, bringing with him one of Ricord's urethrotomes. He was so annoyed by the result of this trial that he has never repeated it, and has always decried the operation, resorting to perineal section in its stead (!)

While thus calling attention to the possibility of a fatal termination of the immediate treatment of stricture, I still maintain its comparative safety. Death has repeatedly been caused by the simple introduction of a sound, and a patient with a tight, irritable stricture will, in my opinion, be exposed to a far greater amount of danger in the aggregate by the repeated use of instruments employed for the purpose of dilatation than by a single act of rupture or incision.

If, on the other hand, he has only a moderate contraction, rendering the introduction of a bougie innocuous, the danger of rupture or incision, when properly performed, is also insignificant.

In addition to the saving of time, inconvenience, and suspense in the restoration of the urethra to its original caliber afforded by the immediate plan of treatment, it has appeared to me that the result was more permanent; or, in other words, that there was less tendency to relapse than after dilatation. It is obviously difficult, if not impossible, to prove this point by statistics; but it is certainly true that patients are more ready and willing to follow out that course of catheterization which should succeed all methods when, in the course of a few days, they have experienced the great relief afforded by this mode of treatment.

The nearer a stricture is situated to the external meatus, the less the danger, as a general rule, from surgical interference.

Strictures within three inches of the external orifice, and especially those at the meatus, are so tough and fibrous that incision is the only appropriate remedy. In the sub-pubic curvature, the vascularity of the tissues would seem to call for rupture in preference to internal urethrotomy; but in practice I have not found any particular advantage appertaining to the former. Indeed, I find my inclination tending more and more in favor of internal urethrotomy, which possesses the advantage of not requiring an instrument exceeding No. 6½ or 7 (French), or less than No. 1 (English), and of being

decidedly less painful than rupture, so that it may be employed with very tight strictures, and, even in timid patients, may be performed without ether.

There was formerly a radical defect in all instruments intended to operate upon urethral strictures from within the canal. I refer to the large size of the shaft, which rendered it impossible to employ them in very tight strictures; and hence these instruments were open to the grave objection that nearly a quarter or more of the treatment must first be accomplished by dilatation before they could be used.

Two comparatively recent inventions obviate this difficulty in an admirable manner, and *enable us to make use of either rupture or incision in any case of stricture through which any bougie, however small, can be passed.*

In one of these inventions—original, I believe, with that eminent surgeon, Prof. W. H. Van Buren, M. D., and recommended by Prof. J. W. S. Gonley, M. D., in a paper which appeared in the New York Journal of Medicine for August, 1869—the extremity of urethral instruments is perforated like a canula for a short distance—say the eighth of an inch from its tip—with a groove extending further up the shaft, so that the instrument may be introduced, as it were, threaded upon a fine bougie previously inserted.

Fig. 1.

This invention, while commending itself by its simplicity, is only adapted to whalebone bougies; gum bougies are too flexible to serve as the guide; and since the latter can often be passed through strictures in the sub-pubic portion of the canal when the former can not, the use of this device is, I think, limited.

In the other plan—for which we are indebted, so far as I know, to the celebrated house of Charriere, surgical instrument-makers, Paris—a fine, flexible bougie is provided with a metallic cap, which screws on to the extremity of the instrument. The bougie may be of any degree of fineness: if its point can be introduced through the stricture and retained for a short time, the main portion of the stem will soon follow. The metallic shaft is then screwed upon the bougie and passed into the bladder, when the stricture is completely under the control of the operator.

Fig. 2.

In my own practice I have extended the use of this plan by providing my urethral case of instruments with a dozen or more flexible gum bougies of various degrees of fineness, all of them armed with metallic screws, any one of which will fit the extremity of either of the instruments I most frequently employ for the purpose of rupture or internal incision—viz., Holt's, Voillemier's, or Maisonneuve's—and which may also serve as a guide for a catheter to draw off the urine.

This plan is only objectionable because it requires a degree of nicety in the adjustment of the screw-tips which few instrument-makers will give, unless carefully watched and driven up to the mark; but it is, I believe, the best, and is of extended application.

These devices, and especially the latter, enable us to *seize the opportunity for an operation.* Strictures are not at all times equally permeable: we may "get through" one day and not another. If a special day and hour be appointed for the operation, unexpected difficulties will often be met with. When a difficult case of stricture presents itself, and the first trial fails to pass the contraction, time and patience are the first requisites. Haste is almost sure to do harm.

Let the exploration be repeated, with proper intervals, always with flexible bougies, armed with screws, available when the opportunity offers; then when, thanks to skill and chance, the contraction is passed, the choice of the operation, whether rupture or incision, is left to the operator. Whichever instrument he prefers may be attached to the bougie, which is coiled up in the bladder, as the shaft is made to advance, and the patient is relieved of his distress upon the spot by thrusting down a rupture-tube or incising-blade. It is in this way that tight cases of stricture, supposed to be "impassible," may often be relieved as if by magic.

There are certain considerations pertaining to the treatment before and after the operation, whether by rupture or incision, which may as well be mentioned here.

No one should think of operating upon a stricture, unless in case of special emergency, while the patient is suffering from serious disease of the bladder or kidneys, or is depressed from any cause. I find that many patients from the South and West are laboring under symptoms referable to malarial influence, aggravated probably by their urethral trouble; and this condition should first be removed by quinine and tonics. But if the patient's general condition be good, no special preparatory course is required. It is well, however, to take measures to have the rectum emptied by an enema.

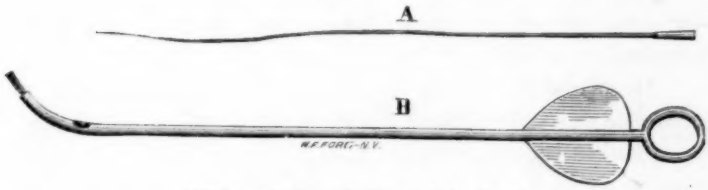
At the time of the operation the size of the meatus externus should be carefully examined; and if it be not large enough to admit a No. 30 (French) sound, it should be slit up by means of a bistoury, or with Civiale's *bistouri cache.*

It is better not to do this before the stricture is passed by the filiform bougie, otherwise the flow of blood is annoying; but the enlargement may be effected either before the shaft of the metallic instrument is introduced, or be deferred until the close of the operation.

Supposing the rupture or incision to have been made, it is desirable to draw off the urine, so that the bladder need not

be emptied for some time; and for this purpose I have devised a catheter (fig. 3), which may be screwed upon the bougie-

Fig. 3.



Catheter, with filiform, flexible, conducting bougie.

conductor without withdrawing the latter from the canal any further than is necessary to detach the metallic shaft of the instrument employed in the operation. A steel stylet traverses the catheter in order to give it greater firmness, and prevent the eye from being clogged with blood. It is of course withdrawn as soon as the bladder is reached.

A cautious exploration of the canal may now be made with a full-sized sound, but should be desisted from if much difficulty is encountered in reaching the bladder. If the rupture-tube or the blade of the urethrotome has been satisfactorily passed down, the passage *must* be patent; but the urethral walls are in a lacerated condition, and the desire of the surgeon to add brilliancy to his operation, by passing a No. 28 or 30 through a canal which a few moments ago would only admit a No. 7, may do mischief.

Most authorities advise that after these operations a catheter should be tied in the bladder, and retained for twenty-four or forty-eight hours. I have never done this in any operations of rupture and internal incision, and have seen no reason to regret my course: on the contrary, I believe that patients do better without this source of irritation. If a permanent catheter be used, its extremity should be left open and connected with a urinal by means of an india-rubber tube. Even then the urine is apt to dribble away by the side of the instru-

ment, and come in contact with the incision—the very thing that the employment of the catheter was intended to avoid.

Before leaving the patient, it is desirable to introduce into the rectum a suppository containing a quarter of a grain of morphia, and to administer five or ten grains of quinine by the mouth.

He should be directed to delay passing his urine as long as possible; and if he should have a chill on the first act of micturition, to take a hot bath. Rest in the horizontal posture is necessary for the ensuing twenty-four hours, but in most cases is not longer required.

The third day after the operation is soon enough for the first attempt to pass a sound; and if urethral fever or other untoward symptoms have occurred, this may be deferred still longer. I have let patients alone for a week and for a fortnight, and in one case, for the sake of experiment, for a month, without finally meeting with any difficulty when the attempt was made. In most cases, however, it is desirable to resort to catheterism on the third or fourth day, passing first a moderate-sized sound, and then one as large as the normal caliber of the spongy portion of the urethra; and this should be repeated at intervals of two, three, or four days by the surgeon himself, until there is reason to believe that the walls of the canal at the site of the stricture have healed.

But a good thing once gotten, the next point is to keep it; and there is no fact with regard to stricture better worthy of remembrance than this, that, after any mode of treatment, a stricture is sure to return in time, unless the patency of the canal be kept up by the intermittent use of sounds. How often these should be used depends upon the amount of tendency to contraction, and varies in different cases. A safe rule is at intervals of four days for a month; then at intervals of a week for six months; and finally at intervals of a month or two for years, or for the remainder of life. But it is not necessary or even desirable that the patient

should be dependent for this after-treatment upon a surgeon: he should be taught to do it for himself, and after a little practice will do it better than any one can do it for him. His instruments should be selected by the surgeon, and he should be impressed with the importance of his using them faithfully.

After these remarks, intended to apply to all cases of rupture and internal urethrotomy, I will proceed to describe more particularly such of the instruments employed as I have found most useful.

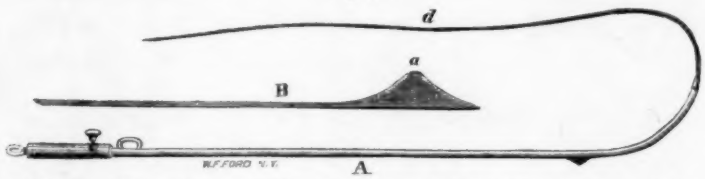
Internal Incision.

The most serviceable instrument for internal urethrotomy is one invented by M. Maisonneuve. It consists simply of a grooved staff, which need not exceed No. 7 of the French catheter scale (two and one third millimetres in diameter), provided at its extremity with a screw-point, to which is attached a filiform bougie. The blades, intended to slide in the groove and to divide the stricture, are triangular in shape, sharpened before and behind, but blunt at the apex, so that they may pass over the sound urethral mucous membrane without wounding it. In several of these instruments that I have seen the groove has been on the concave surface, so that the incision was made upward toward the pubes: it ought to be on the opposite or convex surface, as, I believe, is the case in Maisonneuve's latest pattern.

I have modified this instrument, as I think, with advantage. In the originai, the curve of the shaft is a very long one, necessitated by the fact that the groove extends to the point, and that the blade can not be made to follow a short curve; but the introduction of the instrument is thereby rendered difficult in many cases. I have consequently introduced the short curve of Mr. Thompson, and had the groove extend only through the straight portion of the shaft, which is quite sufficient, since whenever the point has been made to pass the

stricture the straight shaft with its groove will readily follow. (See fig. 4.)

Fig. 4.



Author's modification of Maisonneuve's urethrotome. A, shaft, with filiform attachment, *d*; B, blade, blunt at apex, *a*.

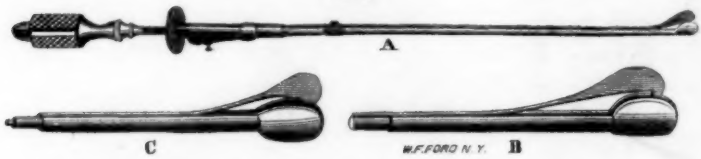
The manner of using this instrument is very simple. In most cases the filiform, flexible conductor is first introduced as a guide, and the shaft of the instrument is then screwed upon it, and made to follow it into the bladder. In a few instances I have been able to introduce the shaft alone, armed with a blunt point, which is always provided when I have found it impossible to pass the conducting bougie. In either case, when the bladder is fairly entered, as may be recognized by the finger in the rectum, the penis is to be put upon the stretch, and the blade, usually the largest in the set, is thrust down to the extremity of the groove, dividing every obstruction before it. The blade is now withdrawn, the bladder emptied of urine by the catheter, and other measures adopted which have already been mentioned.

M. Voillemier objects to Maisonneuve's instrument on the ground that it is likely to wound the healthy mucous membrane, and he instances the case of a patient who died of cholera shortly after the operation, and in whom the urethra was found to be incised from the meatus to the bladder. He proposes to remedy this difficulty by means of a shield, which covers the blade in its passage through the healthy urethra, and can be withdrawn as soon as the stricture is encountered. I have used Maisonneuve's instrument in a large number of cases, and have no reason to believe that, when properly made, it is open to the objection urged; moreover, on trial

of Voillemier's instrument, I have found it more difficult to manage and very liable to get out of order.

The instruments now described divide a stricture from before backward.

Fig. 5.



A, Civiale's urethrotome. B, extremity of urethrotome, with blade projecting, actual size. C, Candmont's modification of the same; blade of different shape and differently articulated.

Civiale's urethrotome acts in the contrary direction, and is designed to pass through the stricture and divide it during its withdrawal, after the blade has been made to project. The terminal bulb in which the blade is concealed equals in diameter about No. 16 or 17 (about seven or eight of the English scale), and hence the instrument can not be used when the passage is of less size. This urethrotome, however, is a very serviceable one in moderate contractions of the straight, spongy portion of the urethra, and I also employ it in some instances when rupture, performed at a previous operation, was not carried to a sufficient extent.

In rare cases of impassable stricture of the spongy portion of the urethra, it may be justifiable to perform internal urethrotomy by means of the lanceted catheter, which consists of a canula and a blade projecting from its extremity. It is hardly necessary to observe that while using this instrument the penis should not be bent upon its point, but that the portions in front of and behind the obstruction should preserve a straight line, in order to avoid wounding the sound urethral walls; and the extremity of the urethrotome should, if possible, be insinuated within the orifice of the stricture before thrusting forward the blade. I have myself never had occasion to use the instrument.

Strictures at or near the meatus are to be divided by Civiale's concealed bistoury, already recommended for slitting up the meatus after operations in the deeper portions of the canal; or, in the absence of this instrument, a curved, sharp-pointed bistoury may be employed, its point protected by wax as it is inserted.

In one case I met with the orifice was so small that I was obliged to resort to the fine probe-pointed knife, which is used for slitting up the canaliculus lachrymalis. Care should be taken after this operation to prevent union of the edges of the wound, which should be separated every day until their surfaces have healed over.

Rupture.

Of late years the rupture of stricture, which was formerly advocated by Perrève, has received much attention, chiefly through the labors of Mr. Holt, of the Westminster Hospital, London.

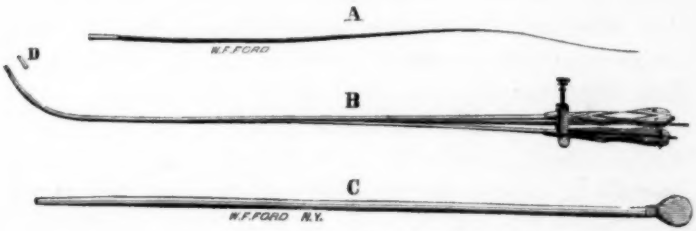
Mr. Holt's instrument, a modification of that of Perrève, "consists of two grooved blades fixed in a divided handle, and containing between them a wire welded to their points, and on this wire a tube (which, when introduced between the blades, corresponds to the natural caliber of the urethra) is quickly passed, and thus ruptures or splits the obstruction."

The instrument, as originally proposed by Mr. Holt, possessed certain defects which I have endeavored to remove. It was evident to others as well as myself that the expansive power of the instrument was insufficient; that even when the largest tube of the set was employed there were some strictures which would merely stretch as it passed without rupturing, and which would afterward show the marked tendency to recontraction which always follows rapid dilatation. The remedy for this was evident; viz., to allow wider separation of the blades, and to employ larger tubes, one of which, after slitting up the meatus, could be selected corresponding in

size not to the external meatus, as Mr. Holt advises, but to the caliber of the spongy portion of the urethra.

The other changes which I have introduced consist in having the point of the instrument at a right angle with the shaft, as in Mr. Thompson's curve, with a view of facilitating its introduction, and in adding a filiform attachment to serve as a guide for the shaft, which is equal in caliber to No. 11 (three and two thirds millimetres in diameter.)

Fig. 6.



Author's modification of Holt's instrument. A, filiform bougie-conductor. B, shaft of instrument. C, tube for rupture.

As previously stated, the bougie attachments will also fit other urethral instruments employed for the same purpose or for incision, so that the choice of the operation is still open after the guide has passed the obstruction. The instrument thus modified is represented in fig. 6. I do not think much is gained by having the central wire hollow, as the capacity of the tube thus formed is too small to allow of the passage of the wire; and the fact that the shaft has entered the bladder may generally be known by other indications. The instrument may of course be used without the bougie, its screw-point being protected with a cap (D) provided for the purpose.

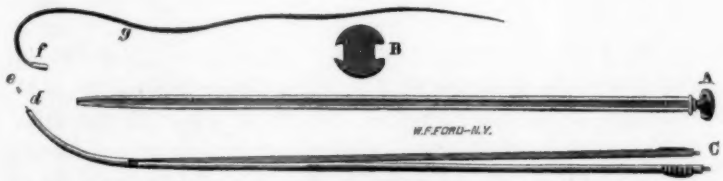
In using this instrument, the shaft should be passed fairly through the obstruction, so that the latter may feel the full force of the rupturing-tube. The point of the tube selected is then to be placed upon the wire between the blades, and to

be thrust down *as rapidly as possible* to the end, in order to insure *rupture* and not mere dilatation of the contraction. Before withdrawing the instrument, it is to be rotated so as to separate still further the sides of the rent.

Mr. Holt believes that by this method the mucous membrane of the urethra "*is not torn*, but *simply dilated*, and the submucous deposit, the cause of the obstruction, is *alone split;* hence the trifling hemorrhage and the impossibility of infiltration of urine." I doubt the correctness of this view, and the lining membrane of the canal has certainly been found to be lacerated in several instances of *post-mortem* examination; but, whether correct or not, this is one of the best means for the treatment of stricture we possess.

Voillemier's rupture-instrument (fig. 7) has too recently come under my notice for me to give it a fair trial, but it appears to possess one decided advantage over Mr. Holt's.

Fig. 7.



Voillemier's Rupture-instrument. A, grooved tube; B, transverse section of the same; C, shaft of instrument; *e*, cap; *f g*, filiform conductor.

The tube, instead of sliding upon a central wire between the blades, is provided with a groove on both sides for the blades to play in; and thus, as shown in the cut, a transverse section (B) of the instrument is circular instead of oval, and the rupturing force is spent equally upon the whole circumference of the canal. I shall not be surprised if this instrument supersedes that of Mr. Holt.

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MORBID STATES OF THE COLON, WITH REMARKS ON TREATMENT, AND ESPECIALLY ON THE USE OF BELLADONNA.

BY SAMUEL G. ARMOR, M. D.,

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Our text-books on practical medicine devote less space perhaps than the subject demands to the consideration of functional diseases of the large intestines. I do not propose in the present article to supply this omission in the literature of the subject, but rather to throw out some practical hints, hoping that they may be of use to others as they have been to myself in the management of a very common as well as very troublesome affection.

As a chronic affection, there is doubtless no more frequent source of bodily discomfort, demanding the every-day attention of the general practitioner, than constipation of the bowels; and yet how brief the space usually devoted to the subject, and how unsatisfactory the results arrived at in the treatment!

Of modern writers, perhaps Dr. Todd has given the most satisfactory description of this troublesome affection in the Cyclopedia of Practical Medicine, under the head of *Colonic Dyspepsia*, in which the whole subject of morbid states of the colon is very fully and clearly presented. The general character of the form of intestinal dyspepsia described by Dr. Todd is persistent constipation of the bowels; and to this result of intestinal atony I desire more particularly to call attention.

There are two considerations which give special prominence to this affection. In the first place, although a secondary condition in the order of pathological sequence, chronic constipation of the bowels sustains a primary relation to other

morbid states, and singularly aggravates and complicates other abdominal affections; and, in the second place, it may be safely affirmed that this morbid condition, from various causes connected with our advanced civilization, especially in our larger cities, is evidently on the increase.

Leaving out of consideration at the present time congestion of the liver and spleen, obstructive valvular diseases of the heart, and other causes affecting the abdominal circulation, it is my purpose to direct attention mainly to morbid states of the colon, resulting in atonic constipation—in my judgment one of the most constantly occurring causes of obstructed abdominal circulation which we encounter.

The symptoms which most usually attract attention are such as relate to the disordered function of the brain and nervous system: headache, giddiness, buzzing in the ears, backache, lassitude, general malaise, and great nervousness are generally complained of. Sometimes during the day there is considerable stupor and drowsiness, and during the night great wakefulness, restlessness, and disturbed sleep. Mental depression and hypochondria are also often present. "These symptoms are frequently accompanied by unaccountable pains in various parts, which exhibit their neuralgic character both in their intermittence and the absence of phenomena, which would be manifested if they arose in such severity from any other cause." The attacks sometimes assume the form of hysteria, but oftener the patient complains of spasmodic or anomalous pains about the heart or side, or in various parts of the abdomen, with irregular, fluttering, and sometimes violent palpitation of the heart.

The pain or rather uneasiness of the colon, which for a time was perhaps shifting in character, may become by degrees more fixed in some part of the abdominal cavity; frequently, at first, in the ascending colon in the right iliac region, accompanied sometimes by severe paroxysms of pain, and not infrequently by nausea and vomiting.

In thin persons deep pressure often reveals a distinctly hard or doughy feeling along the whole course of the colon, accompanied by dullness on percussion. The presence of these fæcal tumors sometimes leads to great confusion in diagnosis; they are occasionally confounded with diseases of the stomach, spleen, liver, and even the kidneys.

A natural result of these fæcal accumulations, acting upon muscular fibers which have lost their tonicity, is dislocation of the colon in its relation to other portions of the abdominal viscera—this disturbed mechanical relation of parts tending greatly to embarrass abdominal circulation.

I am well satisfied that this merely mechanical condition, resulting from intestinal atony and fæcal accumulation, is not duly appreciated in its relations to other morbid states. One frequent result is disturbance of circulation in the uterine vessels. Hence the frequent association of uterine troubles with obstinate constipation of the bowels. And until the lesion of circulation, resulting in mechanical pressure, is corrected, we make little headway in permanently relieving the uterine diseases.

Hemorrhoidal and kidney troubles often result from this same mechanical cause. But the mischief is not confined alone to the mere mechanical arrest of the circulation. The sympathetic nervous system, which is so extensively and minutely distributed to the abdominal viscera, becomes involved in the irritative action. And this is communicated not only to the organs of the abdominal cavity, but, sooner or later, involves the pneumogastric nerve, terminal branches of which are spread with extreme minuteness upon the external and internal coats of the omental peritoneum.

Another consequence of atony of the colon is biliousness, or derangement of hepatic circulation. The morbid condition of the colon may be transmitted to the upper portion of the digestive tube both by continuity and sympathy. In that case the general symptoms of deranged hepatic secretion, and of

consequent perverted primary assimilation, are superadded to those of intestinal atony.

Dr. Chambers, in his excellent work on Digestion and its Derangements, points out with great clearness the distinction in the clinical history of defective excretive powers of the intestines generally—often referred to as "bilious"—and local lesions of the liver, in which there is defective evacuations of bile alone. In the one case there is "partial retention of the whole matter to be excreted;" in the other there is "complete retention of one constituent." Hence the colors communicated to the skin are different. "In local disease of the liver or gall-bladder there is jaundice of the external surface, accompanied by clay-colored stools whenever the flow of bile is impeded, and no change of color so long as it is free; in general defective excretion from the intestines there is dinginess and darkness of complexion, but none of the yellow green of jaundice, and the stools are scanty but not clay-colored."

It is this latter condition—namely, loss of excretive power in the intestines—that sometimes leads to a remarkable form of paralysis; a form in which the muscles of the lower limbs, by almost imperceptible degrees, lose the power of progression. There appears to be no real loss of muscular tonicity; the body can be retained in an upright position; there is no deficiency of sensation; but there is loss of motive power: "the patients can stand pretty well, but can not go."

Having thus briefly sketched the leading features of atonic constipation, so far as relates to its clinical history, I now come to speak of the treatment of this affection, which, under the best and most skillful possible management, is an exceedingly intractable and perplexing malady. Two leading indications at once present themselves: the first is to secure the mechanical clearance of the retained fæces; the second, to restore the colon to the regular and healthy performance of its function.

In securing full and free evacuation of the bowels I need scarcely say that all active purgation should be avoided. Harsh drastic purgatives are most mischievous agents in this as in all other forms of abdominal disease. The milder aperients should be selected; such as castor-oil, the ordinary black draught of senna and salts, or pills of rhubarb and blue mass, alternated with infusion of senna. Nor should hasty cathartic action ever be sought. By the administration of the milder laxatives in broken doses at considerable intervals, and followed in three or four hours by repeated warm-water injections, full and complete evacuation of the bowels can generally be secured.

But the next and most important indication is to relieve the condition upon which the constipation depends; in other words, to restore to the colon its lost tonic action.

In the first place, a well-regulated hygiene should be strictly enforced. It is worse than folly to administer drugs for the cure of disease to those who habitually breathe impure air, take little or no out-door exercise, and are regardless of what they put into their stomachs. The efficient management of a case by suitable diet, bathing, regularity of habits, horseback and other out-door exercise, is often sufficient of itself to effect a cure. Such efficient agencies should of course never be neglected; but I speak more particularly at present of medicinal substances.

To overcome the muscular atony of the intestine, and at the same time to promote intestinal secretion, mild and slowly-acting cathartic substances have been found useful. Of these aloes stands conspicuous as compared with all others of its class. It is conveniently administered in the form of dinner-pill, a form specially suited to the atonic colonic dyspepsia of Dr. Todd. The dinner-pill of Dr. Wood or Dr. Chapman, or the celebrated "Lady Webster pill," are all excellent combinations. In each of them aloes is the chief ingredient. In grain-and-a-half doses, it may be variously combined

with extract nux vomica, extract gentian, extract wormwood, quinine, or other tonics. One pill should be administered immediately before or after dinner.

In some cases of associated dyspepsia with constipation, the purified ox-gall is a valuable addition to the aloes. I have frequently prescribed with fine effect a pill composed of one grain of aloes, two grains of purified ox-gall, one grain of pepsin, and the eighth of a grain of extract nux vomica. One of these may be administered soon after each meal, or after two of the meals, according to circumstances. The smallest possible amount of cathartic substances that will secure one natural operation in twenty-four hours should be the rule: more than this is always hurtful in the end. Liquor potassæ, in from ten to twenty minim doses, administered an hour and a half after each meal, is often a valuable addition to the bitter tonics.

Where atony is confined to the colon, mercury, by reducing still further the tone of the system, is contra-indicated; but when there is associated jaundice, complicated with a deranged state of the duodenum, I know of no substitute for a few broken doses of some mild mercurial. Small doses of podophyllin, leptandrin, or other vegetable cholagogues, may be added to blue mass or hydrarg. c. cretâ; but none of them are, in my judgment, substitutes for the mercurials.

After the use of the more direct cholagogue agents, it may be well to try the nitric acid, or nitric acid combined with taraxacum. Muriate of ammonia is also a remedy to which I attach a good deal of importance when there is hepatic and duodenal complication. The mineral waters, especially the sulphur, alkaline, and slightly purgative, may also be of use.

But I now come to speak of what perhaps I ought to have named first in the order of importance—belladonna. The distinguished French clinical teacher, Trousseau, declared, many years since, that belladonna was *the* remedy for obstinate atonic constipation; and occasionally, here and there, a

practitioner may be found who followed his suggestion, and, so far as I know, they have been pleased with the results. It is for the purpose of placing this remedy more prominently before the profession in the treatment of obstinate constipation that I have written this article.

The exact mode of action of belladonna in the relief of atonic states of the colon may not be understood at present. With its general action as a therapeutic agent we are somewhat familiar. But, in addition to its influence in allaying pain, spasm, and nervous irritation, recent experimental inquiry would appear to establish its influence as a direct and powerful stimulant to the sympathetic nervous system. In the published Gulstonian Lectures, of 1868, by J. Harley, the reader will find extensive experimental researches in this direction.

The influence of the remedy in atonic constipation has been usually attributed to its property of increasing the peristaltic action of the intestines. But Dr. Harley attracts attention to its peculiar influence, not only as an anti-irritant, antispasmodic, and organic stimulant, but as everywhere relaxing the circular muscular fibers of the hollow viscera. In this respect it would appear to be unique in its action. While it relaxes the circular fibers of all the hollow viscera, and allays irritation and spasm, it at the same time tones and tightens the longitudinal fibers of the muscles of organic life. May we not have in this the true explanation of its mode of operation in obstinate atonic constipation? Its action is evidently unlike all cathartic substances. It does not purge; nor does it produce loose stools, but only renders defecation easy and natural. And, unlike cathartics, it is also slow in its action: it may require days before perceptible effects are produced.

According to my observation (and on this point I think I may speak with a good degree of certainty), its effects are peculiarly marked in highly nervous and hysterical constitu-

tions; indeed, in all cases in which there is marked depression of the sympathetic nervous system. In such cases the one fortieth or one fiftieth of a grain of atropine, or one fourth of a grain of extract belladonna, administered two or three times daily, will usually in a short time produce natural and easy defecation.

In a conversation, some time since, with my friend, Dr. J. H. Baxter, of the United States army, he informed me that he had used with equal benefit the extract of stramonium in cases of constipation.

I have been in the habit, for some time, of using the belladonna in the form of suppository. More recently, following the suggestion of Dr. Baxter, I have tried the extract stramonium, as I had been accustomed to use belladonna in the same way, and am thus far greatly pleased with the results. While it appears to be quite equal to the belladonna in promoting easy and natural evacuations, there is certainly less objection to its use for a length of time. Indeed, it possesses, in my judgment, valuable alterative properties which commend its use in many cases of constipation independently of its action on the bowels. Half or three fourths of a grain of extract stramonium may be combined with sufficient quantity of cocoa butter, made into suppository, and used by the patient each night on going to bed. It is admirably adapted in this form to obstinate constipation of nervous females, who suffer at the same time from pelvic irritations from various causes. It quiets irritation of the uterus and bladder, calms and soothes the nervous system, allays irritative actions generally, and permits the patient to sleep.

To give permanency, however, to its effects, its use may be accompanied or followed by small doses of nux vomica, or a dinner-pill composed of aloes and nux vomica. We thereby secure, perhaps, still more universal and permanent tonic action of the paralyzed muscles of organic life, and correct at the same time the morbid condition of the intestinal glands.

Electricity is also an agent of very considerable power, and may be resorted to in obstinate cases as an adjuvant to the treatment indicated. Dr. Baxter informs me that he has also derived signal benefit, in the treatment of obstinate cases of long standing, from the repeated application of small blisters over the descending colon.

The treatment indicated in the foregoing article, to be successful, of course requires perseverance. Both patient and physician should understand this, and both should appreciate the importance of the object sought to be accomplished.

ON EXSECTION OF THE HEAD AND UPPER THIRD OF THE HUMERUS FOR BONY TUMORS.

BY GEORGE C. BLACKMAN, M. D.,

Professor of Surgery in the Medical College of Ohio; Surgeon to the Cincinnati Hospital; and to the Samaritan Hospital, Cincinnati.

The great value of exsection of the head, and upper part of the humerus, for caries and necrosis, as well as for gunshot fractures, has been so long established, that it seems at first view somewhat singular that it is only within so recent a period that the operation has been extended to the removal of tumors involving the upper extremity of the bone. The reasons, however, for the tardy application of the above proceeding to the morbid growths in question, as well as their fallacy, have been so well expressed by Sir William Fergusson in his lectures on the *Progress of Anatomy and Surgery during the present Century*, that we feel tempted to make the following extract:

"A feature insisted upon by Prof. Lizars with regard to operations on the upper jaw was that the whole maxilla should be removed. Now, further experience has shown that in many

instances no such extensive measure is required. The removal of the actual disease, wherever it may be, is all that is essential in such instances, provided the tumor is not malignant; for then even the removal of the whole bone is a questionable step. In operations on the lower jaw conservatism may be, and is, displayed in a manner to which few give much heed; but I beg your particular attention to this fact, that tumors of great size have been removed from this bone. The whole of one side thus implicated has been cut away by incisions across the bone, and the portion left has remained healthy throughout life. I have myself taken away by a horizontal incision as much of the alveolar margin of this bone as contained ten teeth, yet there was no return of the tumor for which the operation had been performed. . . . How few have reckoned on the value of cases like these as showing that in tumors of osseous tissue it is not necessary to remove the whole bone. Yet such a doctrine of destruction has got strangely and, in my opinion, alarmingly prevalent. If a tumor shows in the tibia, even at its lower end, supposing amputation to be decided on, there are many who maintain that the operation must be performed in the thigh; for if any of the bone be left it would be sure to be the seat of a return of disease. The same doctrine is applied to the femur and to every long bone; yet there are no just grounds for such a doctrine. Besides the instances to the contrary which I have already given, I may say that when disease does return after amputation for such tumor it is seldom in the bone, but most generally in the soft parts, and often too at a considerable distance from the original seat of disease. It is implied that there is a peculiar circulation in a long bone whereby, if disease be removed by amputating one end only, the vessels will be sure ere long to work in similar manner in the end that is left. Now, as your Professor of Human Anatomy and Surgery, I protest against this doctrine. There is positively nothing in anatomy to support it, and *I can hardly admit a single instance in pathology* [italics our own]; for where disease has shown itself in bone after excision or amputation, I am more disposed to think that there has been some of the original malady left than that the vessels in the remaining part have imitated the action of those concerned in the development of the original tumor."—(*London Lancet*, June 18, 1864: p. 692.)

Dr. Hodges, in his most excellent treatise on the Excision of Joints (Boston, 1861: p. 31), refers to an excision of the

head of the humerus performed by Roux for osteosarcoma, and adds that the patient died shortly afterward. He quotes from the London Medical Gazette, September 13, 1834. Dr. Hodges states also that Mr. J. Hutchinson removed the head and upper fifth of the humerus on account of a large myeloid tumor developed within the bone, but that death occurred from recurrent disease in the lungs and elsewhere before the usefulness of the limb had been much tested. He refers to the London Medical Times and Gazette, August 20, 1859, for a report of this operation, and to the same journal, November 1, 1856, for another unsuccessful case in the hands of the same surgeon. The disease returned, and the patient perished of hemorrhage four months after its performance.

Dr. Hodges and other writers have awarded to Mr. Bickersteth, of Liverpool, the credit of removing the head of the humerus for exostosis. Even Mr. Erichsen, in his recent edition of his Science and Art of Surgery (Phil. ed., 1869: p. 750), remarks: "Bickersteth has successfully removed the head of the humerus for exostosis." Now, from the report of this case in the Ed. Monthly Journal, June, 1853, it appears that the head of the humerus was not exsected at all. On the 15th December, 1852, he removed an exostosis which had its origin near the head of the humerus, and which bore a remarkable resemblance to the latter. According to Mr. B., it was of similar shape, and possessed all the essential structures of an articular extremity, developed in a perfect but less regular form. It consisted of an elongated neck or pedicle composed of compact bone, and expanded into a globular-shaped body or head, which was crested with a thin layer of glistening, semi-transparent cartilage. To complete the resemblance, the periosteum, which was firmly attached round the neck of the tumor, and constituted its capsule by enveloping the entire body, became reflected near the margin of the cartilaginous crest, and lined by a smooth serous membrane. In this way a shut sac, having all the characters of

a synovial capsule, was formed for the pseudo-articulating extremity. On making a section the body of the tumor was seen to be composed of cancellated bone, and separated from the superimposed cartilage by a thin and irregular stratum of compact structure.

The operations performed by Prof. Syme on the 14th of November, 1860, and on the 23d of August, 1862, are the first we have been able to find recorded. Prof. Syme was consulted on the 9th of November, 1860, by a patient (æt. 43) who was suffering from a tumor of the right shoulder. He states that it was situated under the deltoid, being about the size of a hen's egg divided longitudinally, and of a consistence so firm that it was difficult to distinguish it from that of the bone to which it was attached. The patient had felt pain in the bone about six months before, but did not notice the swelling until a considerable time afterward, when it gradually increased in size with a corresponding aggravation of pain.

Unwilling to propose amputation at the shoulder-joint for a condition so little formidable in appearance (while there could be no doubt that this severe measure would in course of time become requisite, if the disease were allowed to advance until it assumed a more serious aspect), he considered the practicability of affording relief in another way, and took for his guide the principle of practice which has been so well established in regard to tumors of the jaw, that nothing more is required for an effectual remedy in all curable cases than removing the morbid growth so as to divide the bone in a sound part beyond the confines of the disease.

"Having thus reason to expect that removing the upper extremity of the humerus would be sufficient for the purpose, and knowing from the results of similar operations for caries that the arm, notwithstanding this shortening of the bone, would not be materially lessened in usefulness, I adopted the following procedure: On the 14th I made an incision from the coracoid process downward to the extent of about four inches, opened the joint, separated the mus-

cular attachments from the tuberosities of the humerus, protruded the head of the bone through the wound, and sawed it off below the tumor, which was found to consist of a thick cyst, partly osseous at the base, and containing small cysts in its substance, resting on a rough, slightly excavated surface. . . . He was dismissed on the 4th of January, 1861; and I saw him some months afterward in perfect health, with the wound soundly healed, and an arm strong and useful from the elbow downward." (Syme on *Excision of the Scapula.* Ed. 1864: p. 22.)

The disease re-appeared in the scapula about a year after the operation, and in the course of another year attained such a magnitude that it presented a convex surface over nearly the whole extent of the scapula and completely filled the axilla. As the remaining portion of the humerus continued sound, Prof. Syme decided to remove the entire scapula—which operation was successfully performed on the 13th of November, 1863. Fifteen months afterward the patient was in perfect health, and could lift heavy weights with ease. The diseased scapula weighed between four and five pounds; was of soft consistence, and had a very suspicious aspect, "which was strengthened by microscopical examination."

The tumor removed by Prof. Syme on the 16th of September, 1862, by exsection of the head of the humerus, was a fibro-cartilaginous growth, not affecting the joint, but extending round the bone, and presenting an irregularly tuberculated or nodulated surface. Prof. Syme adds that the patient (æt. 40) made a speedy recovery, and the arm soon became strong and serviceable. The recovery was deemed complete and permanent; but early in January, 1863, a tumor about the size of a large walnut could be felt under the cicatrix, which was quite movable and unconnected with the bone. Prof. Syme removed this at once, and found it to consist of a thick fibro-cartilaginous cyst, with serous contents. Although this wound quickly healed, very soon afterward a large growth appeared in the scapular region, which extended into the axilla

and overlapped the end of the humerus. On the 7th of May, 1863, the entire scapula, together with the arm, was removed. Matters progressed favorably after the operation, and during the autumn the patient was in excellent health; "and the last time I heard from him he had been following the hounds." Prof. Syme remarks that the tumor, which presented precisely the same character as those of the former growths, adhered inseparably to the glenoid cavity, neck of the scapula, and acromion process, "thus rendering any less decided measure than the one adopted inadequate for the purpose."

The late Dr. H. N. Bennett, of Bridgeport, Connecticut, performed the first operation of this kind in this country, and the dimensions of the tumor in his case were far greater than in the cases reported by Prof. Syme. Measured over the largest portion of the tumor, January 8, 1862, the arm was seventeen inches in circumference, and the tumor extended from the neck of the humerus to the insertion of the deltoid muscle. The tumor was first noticed by the patient in May, 1860; and although its growth had been somewhat rapid, as the patient appeared perfectly healthy, Dr. Bennett proposed resection as a substitute for amputation; but on consultation with several of his medical friends, and among them the late Prof. Jonathan Knight, of New Haven, the propriety of resection was questioned, in consequence of the size of the tumor, and the removal of so large an extent of the bone being likely to leave a useless arm. It was agreed, however, that an exploring operation should be made, to determine the relations of the outgrowth to the bone and its true pathological character. "If it should be found that the bone was not involved so as to necessitate the removal of the head, then I was to attempt an exsection merely of that portion of the shaft of the humerus included in the disease. The examination proved conclusively that no operation short of a resection involving the head of the bone was practicable, and this was negatived." A minute piece of the foreign growth

removed was examined under the microscope, and no cancer cells could be detected. The patient was dismissed to await the further progress of the disease, the doctor having determined to postpone amputation as long as possible. The small exploring wound could not be healed in consequence of the outward pressure of the tumor, and the suppuration which soon followed told seriously upon the general health of the patient. "He rapidly emaciated, and, in short, presented all the constitutional symptoms of suppurative irritation, so that at the end of five weeks it became evident that something must be done immediately; and, notwithstanding the apparently unfavorable condition of things, I determined to attempt the resection." The operation was performed on the 14th of February, 1862. The deltoid was completely bisected by one long incision, extending from the acromion process to a short distance below the deltoid, and considerable of the periosteum was saved, after which the exsection was readily completed. "The length of bone removed, including the head, was five and a half inches; the tumor involved it from the neck of the humerus to within half an inch of the point at which it was sawed off, and was thirteen inches in circumference at its largest part, measuring in the direction of the circumference of the bone."

Dr. Bennett's case was fully reported in the American Journal of the Medical Sciences, October, 1863, and in that it is stated: "At this date, sixteen months after the operation, I have just received a letter from Mr. Andrews, in which, speaking of the usefulness of the arm, he says he 'can plant corn as fast as any man.' The limb has shortened nearly an inch and a half, and I am satisfied, from an examination which I made on the 1st day of April of this year, that there has been a slight reproduction of bone up to within two inches of the glenoid cavity."

The microscopical examination of the tumor showed it to be chondromatous, and for nearly five years after the operation

the patient was in an excellent condition. In a letter received from my late and esteemed friend, dated October 3, 1866, he thus writes: "It will be five years next February since the operation, and my subject is in the most perfect health, with no re-appearance of the tumor. You would be surprised to see the amount and variety of labor which he can perform. He plows, hoes corn, cuts down forest trees, etc. The arm has shortened so that there is now but little gap between the end of the humerus and the scapular articulation. I flatter myself this is one of the most successful cases on record."

During the summer of 1865 we were consulted by a strongly-built man, general health excellent, and about thirty-five years of age. For many years he had been employed as a river pilot. Some eighteen months before he consulted us he had noticed a gradual enlargement of the upper part of the right humerus, and had placed himself under the care of a female physician who professed to have the power of curing disease by the "laying on of hands." After submitting to a "faithful" trial of her mummeries, he was brought to a realization of a portion at least of King William's prayer, when, as he applied the "royal touch" to one who insisted upon the operation, he exclaimed, "God grant you better health and *more sense!*"

At the time of his first visit to our office the shoulder presented the appearance represented in the wood-cut.

The results of the operations performed by Prof. Syme and Dr. H. N. Bennett induced us to resort to the same proceeding. The patient secured a room at the old St. John's (now Samaritan) Hospital, and the late Dr. Floyd, then resident physician, made a full report of the case. This report has been lost, and for the dates of operation we have relied upon the statements made to us by Dr. Haile, a resident of our city, and who succeeded Dr. Floyd as resident physician. The operation was performed in September or October, 1865; and, in consequence of the great extent of the disease, at least

one third of the humerus with its head was exsected. The description given by Prof. Syme of the appearances of the parts removed in his first operation would apply to our own

case, yet the microscopical examination revealed nothing but the cells of chondroma. The wound healed favorably; but in the course of four or five months it was evident that the disease had invaded the glenoid cavity of the scapula, and during the spring following the first operation it had attained such a size that the patient earnestly demanded amputation at the shoulder-joint. At the time of the operation the upper

extremity of the humerus seemed imbedded in the morbid growth; yet during the amputation it became evident that it was perfectly healthy, and that the whole morbid growth was limited to the glenoid cavity, so far as its origin was concerned, but the diseased mass extended under the pectoral muscle beneath the clavicle, and overlapped the inner and posterior surfaces of the scapula. With a lithotomy scoop and the bone-gouge forceps we succeeded in removing the morbid growth, and then applied a strong solution of the chloride of zinc to the denuded surfaces, and directed that its use should be continued until the wound had closed. At the time of the last operation the patient was at his home, about thirty miles from the city, and we did not see him again. Some months afterward we learned that he had died suddenly of hemorrhage, the result of caustic applications made by some "cancer-curer," under whose care he had been persuaded to place himself. The disease had re-appeared in the scapula, and in the attempt to destroy with caustic the masses projecting into the axilla, the axillary artery had doubtless been opened, and hence the sudden death. If asked why we did not imitate the practice of Prof. Syme, and at the time of the amputation at the shoulder-joint remove the entire scapula, we may answer that, in the first place, we believed that we could, as we did, gouge and scoop out the diseased mass; and further, the patient himself had resolved that the amputation, and no other operation, should be performed. If called again to a similar case we should insist upon the complete operation as performed by Prof. Syme. We have removed the scapula in three cases—two in civil practice, for caries and necrosis, and once for gunshot fracture—and can corroborate the testimony, now afforded on a large scale, that without the scapula patients can have a most excellent use of the arm.

M. Heurtaux, in the *Nouv. Dict. de Med. et de Chir. Prat.*, tom. 7th, article *Chondroma*, refers to two cases in which MM. Nelaton and Chaissaignac have preserved the upper

extremity, in cases of chondroma of the humerus, by exsection of the diseased portion, and adds that in these cases the surgeon should rarely hesitate on account of the enormous size of the morbid growth. We have been unable to find the detail of the cases to which M. Heurtaux alludes, but in reference to the size and nature of the morbid growth as determining the kind of operation, if any, to be selected, we will venture to offer a few remarks.

Sir William Fergusson has declared (*op. cit.*) that he can hardly admit a single instance in pathology in which amputation should be substituted for exsection in the removal of tumors of bone, in cases where the latter is practicable, and that he believes amputation to be a "questionable proceeding" when there is reason to regard the disease as malignant. Yet the London Lancet, July, 1861, gives an account of an amputation at the shoulder-joint, performed by Sir William himself, for "a medullary tumor" of the upper end of the humerus. It is stated that on removal it measured more than thirteen inches in circumference, or nearly four inches less than that reported by Dr. H. N. Bennett. The reporter remarks that the disease proved to be malignant, as was suspected, developed within the shaft, quite close to the head, and having a thin shell of expanded bone around it, perforated in one or two places by the disease. He adds that it consisted chiefly of a mass of soft, medullary-like substance, and that the articulating surface, perfectly smooth and natural, appeared set in the upper portion of the expansion which involved the upper third of the bone. According to the record of the house-surgeon of King's College Hospital, the tumor before the operation was moderately regular in form, in parts very hard to the touch, at others softer, while the skin was unadherent, and the axillary glands not implicated. The superficial veins above and in front were enlarged and tortuous. In the history of the family there was no trace of malignant disease. The patient, a female, married, was twenty-eight

years of age, "tolerably stout and well-nourished, but of a sallow and somewhat anæmic complexion." Three weeks after the operation it is reported that the stump had nearly healed, and that she was doing as well as could be wished. The duration of the disease had been about the same as in Dr. Bennett's case; viz., some eighteen months.

The author of the report of the case published in the London Lancet remarks that the malignant character of the disease left no alternative but the course adopted—a statement certainly not in harmony with the above extract from Sir William's lecture. It is to be supposed that the reported diagnosis in this case was that expressed by the distinguished operator himself; and yet, with all of his unsurpassed skill, it is possible, indeed probable, that the malignancy of the growth may not have exceeded that in the cases already mentioned, or of those to which we shall refer. We regret, however, that we are unable to trace the progress of the above case beyond a few weeks after the operation.

There is abundant evidence to prove that patients affected with chondromatous tumors of bone have in other respects enjoyed most excellent health for many years. The morbid growth may have attained the most enormous size, as well as the cutaneous veins passing over its surface, and even the lymphatic glands may have become implicated, and yet the patient shall finally perish not from a cancerous cachexia, but from a kind of putrid infection. The jelly-like softening described by M. Broca, in Costello's Cyclopedia of Practical Surgery, article *Tumors, Chondroma*, vol. iv, p. 488, has been replaced by a fluid-like honey, or synovia, or even by serum, and this fluid has undergone putrefaction.

Sir Philip Crampton published in the Dublin Hospital Reports, vol. iv, the details of a case in which a chondromatous femur measured six and a half feet in circumference, and in the center of which was a cavity containing several quarts of a brownish-colored fluid. The tumor had existed for seven-

teen years without exerting any unfavorable influence on the general health, when the patient was at length suffocated in the act of vomiting a fluid, which "in color, odor, and consistence exactly resembled that found in the cavity of the tumor." M. Broca, in the article above-mentioned, refers to the celebrated case which was under the care of his father-in-law, Lugol, at the St. Louis Hospital. The femur measured nearly six feet in circumference. The patient had obtained a living by frequenting the popular *fêtes*, where he was exhibited as a curiosity, and was well known as the living balloon. "At last, being no longer able to walk, he came to the hospital. The tumor burst one day, giving issue to sixty pounds of serum, and he died from putrid infection. A similar case occurred under M. Nelaton's care. The tumor burst, giving issue to a large quantity of an offensive, sanious fluid, and the patient died some days after."

Mr. Gamgee, in September, 1862, amputated successfully at the hip-joint, in a case where the femur with the chondromatous mass removed weighed ninety-nine pounds. It is stated that two years after the operation the patient continued perfectly well, and had increased in weight more than a hundred pounds. In this case the lymphatic glands in the inguinal region were enlarged to at least three times the natural size.

We have had under our observation for the last fourteen years a young man with chondroma of the left shoulder, and when first seen by us the tumor had attained extraordinary dimensions. Enormous veins were scattered over its surface, and at two points there were extensive fungus-like projections with ulceration, which, when injured, gave rise to alarming hemorrhage. When he first came under our care we had no doubt of the malignant character of the disease, and yet we had the pleasure a few weeks since of presenting him at our *clinic* at the Cincinnati Hospital in perfect health. The left arm, if removed, would probably weigh some forty pounds, as

may be judged from appearance of wood-cut. Some three years since he came to the St. John's Hospital, apparently laboring under symptoms of putrid infection, as described

by M. Broca, and we entertained no hope of his recovery. Yet in a few days he was able to make his appearance on the post-office steps, where for many years he has been an

active newsboy, and where he may still be found exposed to the severest changes of weather, and yet retaining his health.

Some four years since a young lady, from Louisville, Ky., came to the St. John's Hospital to place herself under our care, with a tumor of the upper half of the humerus, in many respects resembling the one just mentioned. The tumor with its fluid contents—bloody serum—we think would have weighed about twenty pounds. She died with all the symptoms of putrid infection, as did another patient, the skeleton of whose diseased femur is in our possession, and in which the circumference was nearly four feet.

M. Heurtaux, in the *Nouv. Dict.*, etc., already quoted, distinctly describes two varieties of chondroma, viz., the hard and soft, conditions which exist throughout the disease. He adds that the subcutaneous veins may become enormously dilated; but as the cartilaginous tissue is in itself but little vascular, this enlargement is found only when the tumor has reached considerable size, so as to compress the deep-seated veins. He adds that the soft chondromas present at first view so little the appearance of a cartilaginous production that they are frequently supposed to be of an encephaloid nature; and at page 518, in enumerating the symptoms which are to aid us in establishing the differential diagnosis, he is compelled to admit that the difficulties in certain cases are so great as to be insurmountable.

In the cases reported by Prof. Syme, as well as in our own case, we have seen that there was a speedy return of the disease in the adjacent parts, and yet no one will dispute that this is a characteristic of chondroma as well as of malignant disease. The following example of the renewal of the malady after extirpation, and of prolongation of life under most unpromising circumstances, is worthy of record in connection with the cases already quoted. It is one of those instances in which the removal of the entire disease was rendered

impossible, in consequence of the fact that so large a portion of the soft parts adjacent to the bone had become involved.

Lemuel H., a negro (æt. 30), was admitted into St. John's Hospital with an immense chondromatous growth, of nearly ten years' duration. Some idea may be formed of its size from the wood-cut.

In some parts the tumor was quite hard; in others it had an elastic feel, imparting the sensation of indistinct fluctuation. On the inner surface of the growth there were two openings, through which from time to time he had lost large quantities of blood. With the exception of the debility occasioned by these attacks of hemorrhage his health was good. On the 2d of July, 1859, assisted by the late Drs. Charles S. Tripler and Fries, Drs. Foster and Muscroft, I attempted the removal of the enormous mass. A curvilinear incision was made rapidly from just in front of the ear, which passed over the most prominent portion of the tumor to near the left angle of the jaw. The facial arteries were much enlarged, and excessive hemorrhage followed their division. That from the left was readily controlled, but the retraction of the vessel on the right side rendered the pressure ineffectual. Seizing the most prominent part of the tumor with both hands, I wrenched out the largest portion, while my assistants applied compression to the carotid artery and persulphate of iron freely to the bleeding surfaces. At length the hemorrhage was arrested, but not until the pulse and respiration had become almost imperceptible. In a few

moments he rallied a little, and we proceeded to remove the body of the jaw as far back as the angle, at which point no trace of osseous structure remained. The exhaustion of the patient was now extreme, and it was evident that he could not then survive the completion of the operation. Beef tea and whisky were administered both by the mouth and the rectum. Artificial respiration was kept up for some fifteen minutes, and in the course of half an hour reaction took place, and the patient was placed in bed. On the 7th of August we removed the ramus and the overlapping structures, which, including the parotid gland, were blended in one common mass, extending deeply toward the root of the tongue and the right side of the pharynx. By wrenching and scooping, and the use of the bone-gouge forceps, we completed the operation, as far as possible, and the entire denuded surfaces were thoroughly saturated with a strong solution of the persulphate of iron, as we apprehended that some of the softer tissues adjacent to the bone might contain cells which would favor the renewal of the disease. In three weeks Lemuel's health was re-established, and when examined by Dr. Foster and myself a year after the operation we could discover no signs of a return of the morbid growth. From the time he left the hospital he was intoxicated almost daily, and frequently deprived of proper food or comfortable shelter. We had lost sight of our patient for a long time, but had heard indirectly that there was a renewal of the disease. Six years after the operation Lemuel came to the hospital for the removal of a large tumor, which extended from the right side of the pharynx along the line of the extirpated ramus and body of the bone. It was of the same character and about two thirds of the size it presented in July, 1859. The second operation—November 28, 1865—was attended also with great loss of blood, but he made a good recovery. On the 9th of September, 1869, we met our patient in the vicinity of Cincinnati, in good health, but intoxicated, as, we learned from

those who had seen him, has been his condition for much of the time since the second operation. There is now another tumor, but far less formidable than that extirpated in 1865. Here then we have an example of this extraordinary disease, of nearly twenty years' duration, and yet, after all his hardships, and the fearful operations to which he has been subjected, the patient was in September, 1869, in the enjoyment of excellent health!

Thus we have shown that the rapid growth and extraordinary size attained in certain cases of bony tumors, the dilatation of the blood-vessels passing over them, the soft, medullary-like substance entering into their composition, the occasional invasion of the lymphatic glands, and the speedy return after removal, are not in themselves sufficient to indicate a malignant diathesis; and for proof of this assertion we might quote from Müller and Virchow to Paget, Broca, and Heurtaux. In view of this acknowledged difficulty in determining their natures, the surgeon must feel what has been so well expressed by Mr. Paget, when he is trying to decide the question of amputation or resection. In the clinical remarks which he made after removing a great part of the scapula for a disease of suspected malignant character, he remarked, as to what was possible as well as probable:

"It might have been fibrous, or cartilaginous of the softer form, or hydatid; but, on the whole, he came to the conclusion that it was medullary cancer. The tumor had the ordinary characters of medullary cancer. The skin over it was smooth; it was elastic, globular, and grew from bone. The youth of the patient also was in favor of this opinion. Then again it has been of only twelve months' growth. It was therefore three to one that it was medullary cancer. Still, as it was possible that it might be a simpler form of disease, it was for this possibility considered right to give the boy the chance of the operation. It might seem (Mr. Paget said) that there was little profit to the boy in undergoing so dangerous an operation for the removal of malignant disease. The operation was done in the hope, however slight,

that it might not be cancer. He believed that it was cancer, but it was not certain, and this uncertainty was the reason why the operation was performed. The tumor was soft, and had a granular break, and there was the characteristic cancerous juice. . . . He hoped that the boy would at least be free from the disease for some time; but there was no reasonable hope that he would live very long."—(*London Medical Times and Gazette*, November, 1862.)

We can not conclude our article without a notice of the opinions of Prof. Gross, as expressed in his most excellent System of Surgery, 3d ed., vol. i, pp. 846, 847. While he concurs in the views already expressed, as to the difficulty and even impossibility of making an accurate diagnosis in cases of supposed malignant disease, he gives as the most reliable guides, the early period of life at which the tumor shows itself, the rapidity of its growth, the great bulk it attains, the depth of its situation at the commencement of its development, the lobulated condition of its surface, and the extraordinary enlargement of the subcutaneous veins. And then he continues: "The moment ulceration occurs the case speaks for itself, the diagnosis being no longer equivocal." Now, to say nothing of the other symptoms enumerated by Prof. G., the case of the young man of whose arm we have given an illustration, as well as that of the negro Lemuel, show conclusively that *ulceration* does not settle the question of the *malignant* character of the tumor, and we might adduce abundant evidence in support of our assertion from the contributions to this department of surgical literature by the distinguished authorities to which we have had occasion to refer. Amputation, Prof. Gross believes, should always be preferred to excision when the morbid growth occupies an extremity, and as near to the trunk as possible, as conferring greater safety. When the hand is involved, the fore-arm, he adds, should be cut off near the elbow, and if seated in the radius and ulna the amputation should be pretty close to the shoulder. In giving the indications in general for amputation,

we find the following unequivocal declaration as to the course he would pursue when the head of the humerus is involved, even though the disease had been of but short duration.

"To cut off an arm at the shoulder on account of an incipient cancerous affection of the head of the humerus, when the elbow, fore-arm, hand, and fingers are all perfectly natural, and glowing with health—unconscious, so to speak, of the fate which awaits them—is enough to sicken the stoutest heart, and to discourage the boldest operator. If there is a more disagreeable task than this I am ignorant of it; and yet I would not shrink from its performance even when there is but a faint prospect of prolonging life, if only for a few months."

In glancing at the early history of exsection of the head and upper part of the humerus for bony tumors, we referred to the cases in which Roux and Mr. J. Hutchinson had operated for malignant disease, and, as stated, with results by no means encouraging; "perhaps," says Dr. Hodges, "even with less than amputation," *op. cit.* 31. But Prof. Gross admits that with but one exception, in all the cases of encephaloid of the extremities that he has operated upon himself, or seen operated upon by others, there has been a speedy recurrence of the disease, frequently in less than three months, at the site of the amputation, in the adjacent lymphatic ganglions, or in some internal organ, and the patient has died a short time afterward. Such a statement, which doubtless accords with the experience of the majority of surgeons, lends but little support to the opinion expressed by Dr. Hodges, as above quoted; and we feel confident that but few at the present day can be found to dispute the statement of Sir William Fergusson, that amputation in cases of malignant disease of the head of the humerus is a "questionable proceeding." Again, we can not see with what propriety the operation performed by Roux can be regarded as proof that the results of excision are really less encouraging than amputations. Dr. Hodges refers to the London Medical Gazette, September,

1834, for the report of the case. Now, on examination of said journal, we find the following very imperfect notice:

"EXTIRPATION OF SHOULDER-JOINT FOR OSTEOSARCOMA.—M. Roux performed this operation lately at La Charité. It occupied an hour and a quarter, notwithstanding all the cleverness and address for which the operator is so celebrated. The patient sank from exhaustion in two hours after leaving the theater. The diseased mass weighed about fifteen pounds."

Now it is, we think, beyond question that by the term osteosarcoma here was meant chondroma; for (as Mr. Stanley justly observes, in his Treatise on Bones) in the records of surgery many of the cartilaginous tumors designated as osteosarcomatous, and osteosarcoma, and chondroma, are by Müller and himself employed as synonymous terms.

In one of Mr. Hutchinson's cases, quoted by Dr. Hodges, it is stated, where the head and upper fifth of the humerus was removed on account of a large *myeloid* tumor, death occurred from recurrent disease in the lungs and elsewhere before the usefulness of the limb had been put to much trial. Now M. Broca asserts, in his elaborate article on *Tumors*, in Costello's Cyclopedia of Practical Surgery, vol. iv, p. 494, that the myeloid may be classed with the most innocent tumors, although this was not the opinion formed of them at first, when they were often confounded with tumors of a fibroplastic nature.

But, without extending our remarks any further, we will conclude with the simple declaration that in those cases in which the diagnosis is doubtful, but where the fingers, hand, fore-arm, and elbow are all perfectly natural, and glowing with health, as so graphically described by Prof. G., and where the cancerous (if it be cancerous) affection is limited to the head of the humerus, we certainly shall shrink from the disagreeable task of amputation, and substitute for it what we regard as the only justifiable proceeding—that of excision.

CINCINNATI, December, 1869.

Reviews.

The Transactions of the American Medical Association. Volume XX, 1869. Pages 853, 8vo.

It is now nearly a quarter of a century since the convention of medical men was called in New York which resulted in the organization of the American Medical Association. The career of the association during these years may be characterized as one of industry and harmony. It has engaged many of the best minds in the profession of our country, and elicited essays and reports from our foremost writers on almost every subject connected with medicine. Its transactions, published from year to year, form a long row of portly volumes on the shelves in our libraries. In short, it has added hardly less than fifteen thousand pages to the medical literature of the times. The leading purpose of its formation being the moral as well as the educational improvement of the profession, it early adopted a code of ethics which has been universally accepted, and as generally observed as any such code is likely ever to be among men. How far the Association has fulfilled its mission according to the views of those who were most zealous for its establishment, or whether it has accomplished all the good they expected from it, may admit of some doubt; but the most captious, we believe, will not deny that many benefits have resulted from its organization. It has brought face to face thousands of physicians from distant sections of the Union who but for it would probably never have met. It has strengthened the feeling of good-will throughout the whole brotherhood. It has given to physicians a higher conception of the dignity of medicine. It has infused a spirit of emula-

tion into the entire medical body of the country. And if it had done nothing beyond this, the exercise of an influence upon the profession at once so harmonizing and so vivifying would entitle it to the respect of every American physician.

As a necessity for the creation of a national medical society, it has been urged from the beginning that our profession is suffering from a radically defective system of medical education, the evils of which could not be corrected except by a combined effort of the profession. "Reform" was the watchword with which its originators started forth; and this has been the cry heard at every annual meeting of the Association. The first president, the learned Chapman, in his address at Baltimore, spoke of the profession as having become "corrupt;" as "a tainted body." Language to the same effect has been often since used in addresses and in reports of committees, and is repeated for more than the twentieth time in the volume before us. The various writers and speakers have appeared to vie with each other in the severity of their invectives against the alleged abuses. Each one has striven to draw a darker picture of the evils weighing us down than had been presented by all who had depicted them before. Dr. Baldwin, in his learned and patriotic address, while he insists as earnestly as any previous president upon the extent of the abuses and the necessity of reform, seems ready to despair of any wise action on the part of the medical schools, and is prepared to invoke "*Federal legislation*" in behalf of medical education. A correspondent, whom he describes as "one of the most distinguished surgeons of the age," as one "who has been engaged during the greater portion of a long and brilliant life in teaching," and who at different times "has held professorships in several of the foremost colleges in the Union," is quite as desponding as he is. This correspondent, who also, as we are informed, "now occupies a chair in a school which does honor to the profession through its *forward tendencies*," writes thus on the subject to Dr. Baldwin:

"The future holds out no promise of amendment. We shall go on from bad to worse until the people can stand it no longer, and then we may hope to be able to effect some reform by our efforts as a great national association. The medical schools are getting worse every year—*belowering*(?) [our italics] the standard of education, and opening their doors more widely by the reduction of their fees. The time is near at hand when honorable men will cease to take any interest in medical teaching."

Such denunciations of the profession we have always regarded as unjust. Its defects, in our judgment, have been greatly exaggerated. No apologist of our system of medical education would pretend to say that it is a perfect system; on the contrary, every one will admit that it has many faults; but a thousand facts that might be cited abundantly show that it is not "going on from bad to worse." The tree, it has been said, is known by its fruits. A system must be judged by its results. Tried by this test, let us see how the case stands with our medical colleges. It is now a little more than fifty years ago that the question was asked by the leading literary Review of the world, "*Who reads an American book?*" And we may ask, How many American books on medicine at that time were there to read? Very few indeed. But how stands the case to-day? They are counted by twenties, by fifties, by hundreds. And is there an English or French or German physician living who would now repeat the question of the Edinburgh Review? These books (of which we are proud, and many of which are as highly esteemed abroad as they are at home) are the productions of physicians educated in our schools—those very schools which, going on steadily "from bad to worse," as we are told they are, are yet turning out writers in augmented numbers and of constantly increasing excellence. If to this it be objected that these authors are not fair representatives of the body of the profession, we reply that the very popularity and wide circulation of their works is proof that they address a dis-

cerning as well as a large reading public. *Vates vatem caret.* Profound authors need intelligent readers. Great writers on science do not spring up in communities where science is neglected. But, in further answer to this objection, we would point to our medical journals, which, to say the least, have multiplied quite as rapidly as our systematic works and monographs on medicine, and which, we assert with great confidence, are steadily improving, not only in the matter but in the style of their contributions.

It is therefore, we contend, no partial elevation that has taken place in the profession, like the upheaval of mountain peaks from a dull plain, but a general rising of the whole body, such as goes on when continents are slowly raised out of the ocean.

In further illustration of the position for which we contend, we proceed to cite another instance, which to most minds, we persuade ourselves, will be conclusive as to this question. The civil war from which we have just emerged was the most gigantic that has been waged in modern times. It called into service as large a number of medical men as probably ever, in the same space of time, entered an army. The statistics of the war are in part published, and have been pronounced creditable to the medical officers on both sides. They show, it is admitted, as large a number of great operations successfully performed, as many wounds and cases of disease safely treated, as much science in hygienic administration, as small a general mortality as will be found in the statistics of any army of the same magnitude. These army physicians and surgeons had for patients as intelligent a soldiery as the world has ever seen in arms. It was made up in large part of the flower of our population, "the rose and expectancy of the state." Of these cultivated, chivalric men our medical staff had at all times, and to the last, not the confidence merely, but the respect and the esteem. They were the companions and social peers of the officers highest

in command. And yet they were graduates of our medical colleges, under the system of instruction held to be so defective, gathered without any special training for the service from all the towns and villages and cross-roads in the country.

In sober verity, the profession of medicine in America has always been a *live* profession—not less active in mind than in body; enterprising, inquisitive, inventive, independent; full of resources, and ready with few and simple instruments to engage in the greatest operations; not learned in books—having, in truth, for the most part few medical books to read—but well endowed with mother-wit. Such were American practitioners in earlier times, and they have gone on improving with the restless age in which they have lived. To-day there is hardly a county-town in any of the states where a physician may not be found ready to undertake almost any capital operation in surgery. Everywhere throughout our country reading, cultivated physicians are to be met with who keep themselves informed of what is passing in the profession in every quarter of the globe. The discoveries, the suggestions, the opinions of Simpson, Anstie, Fergusson, Trousseau, Virchow, are read and discussed in Kentucky, in Texas, in Arkansas, before their novelty is worn off in Europe.

Still the profession is not all that we should like to see it, not all that it is destined to become. We fear, as has been often alleged in our National Association, that many of its members are not able to spell; more, we much fear, know hardly anything of Latin and still less of Greek. We could wish it were otherwise. We would be glad to see every physician a scholar, deep-read in classical literature as well as in medicine; for we have faith in the old notion that such learning *emollit mores nec sinit esse feros.* It would be a grand spectacle to behold a profession made up of such scholars as Dr. Good, whose erudite "Study of Medicine" is collecting venerable dust in so many libraries. But the old trouble still

presses upon us—*ars longa, vita brevis.* And, besides that there is not time to learn all, those who seek to reform our educational system are not agreed among themselves how much the student of medicine should know before he is admitted into our colleges. One committee insists that he shall be acquainted with "so much of the Greek and Latin languages as will enable him to understand the technical phrases of the profession;" which means, if it means anything, that he shall have a profound knowledge of those languages, for nothing short of this would discover to him the roots of our scientific terms. The last committee that has reported on the subject, consisting of Dr. Reeve and Dr. McCook, in one of the most finished and able papers ever laid before the Association, would not require any acquaintance with Greek. And so it will be, as it always has been, in regard to the preliminary studies of young men preparing for the profession of medicine. Dr. Rush long ago avowed his conviction that the dead languages ought to be discarded as a part of that preparatory training. Dr. Caldwell was shocked at the suggestion. In a life of his great preceptor, written for Delaplaine's Repository, he declared that in his belief Dr. Rush had done more mischief to the profession by uttering this opinion than he had done good by all his other writings put together. And yet Dr. Caldwell, before the close of his long life, which was spent in efforts to improve medical education and advance the interests of medicine in our country, wrote an elaborate argument against the utility of those languages. These were his matured opinions and last words on the subject.

We by no means share with Dr. Baldwin and his learned correspondent in the gloomy view they take of the future of our profession. We can clearly see that in the last fifty years it has made great progress. It is advancing now, and we have the amplest conviction that it will continue to advance "with the process of the suns." But it is not from "legisla-

tion" of any sort that we expect its improvement. Nor have we any more faith in the remedy to which his friend, the professor in "the school of forward *tendencies*," is looking—the uprising of the people. The people, we grant, are very apt to respect and reward professional merit; but we are compelled to admit that they are very prone to countenance charlatanry too: and this not the common people alone; that would not be so bad; but educated men, scholars, members of congress, members of parliament, clergymen, editors, and authors. What hope then is there in the people? On itself the profession must rely. The Medical Association is helping it. Let this great society go on in the path it has been pursuing, trusting for results to its wise suggestions and to its incidental influence, and never turning its thoughts to legislation, and it will do yet much more for the profession.

We regret that so little space is left us to notice the many excellent papers of a practical character contained in this volume. Among the articles which will be read with special interest by practitioners are the following: Dr. Osborn's paper on the appearance of the tongue in malarious diseases; one on the prophylactic and therapeutic uses and abuses of quinia and its salts, by Dr. Stephen Rogers; the prize essay of Dr. S. S. Herrick on quinine as a therapeutic agent; the prize essay of Dr. Roberts Bartholow on the physiological effects and therapeutical uses of atropia and its salts; and the reports of committees on the climates and diseases of New York, Texas, California, and Massachusetts. Dr. Sayre has some interesting cases of "lead palsy," resulting from the use of a cosmetic called "Laird's Bloom of Youth," designed to warn the profession of the danger of these articles, now so generally used.

Dr. Osborn has been insisting for many years on the importance of the peculiar appearance of the tongue in subjects of malaria. In 1851 he called the attention of the profession to this morbid phenomenon in a paper published in the

Western Journal of Medicine and Surgery, and since that time it has been the subject of careful observation with him. The malarial margins, which he illustrates by a colored lithograph, begin forming, he says, "the moment the poison enters the blood." This appearance of the tongue he has found constantly to accompany the malarial poison, and he recognizes not only the presence of the miasma by the tongue, but the intensity of its action by the various shadings of that organ. It is, he says, "an habitual expression of his that the tongue is responsible for the appropriateness of quinia, it matters not to what class the disease may belong, or what the character of the diathesis or idiosyncrasy of the patient."

The report of Dr. John Bell on the relations of alcohol to medicine is one of striking ability, as is everything that comes from the pen of that veteran writer. It is a paper which ought to be issued in a separate form, and distributed widely over the country, to be read by the people as well as physicians.

We hope to return to this interesting volume on some future occasion, and enrich our pages by extracts from its valuable communications. L. P. Y.

Clinic of the Month.

TRISMUS AND RHEUMATISMAL TETANUS.—Dr. J. B. Schmidt, Berliner Klinische Wochenscrift, No. 6, 1869, reports a case of trismus and rheumatismal tetanus successfully treated by the tincture of Calabar bean. The subject of the attack was a girl eight years old, and its cause exposure to the cold night air. Calomel internally and mercurial ointment to the vertebral column were used for a day or two. Then the patient commenced taking the tincture, at first ten drops every hour, with very rapid improvement. Two days subsequently, when the tetanic symptoms became more marked, the remedy was given every hour, and again a marked amendment. The treatment lasted about three weeks, during which time she took in all sixty grammes of the tincture of Calabar bean. The pulse fell from 140 to 120, to 115 under the action of the remedy, and finally to 100.

PARACENTESIS IN PURULENT PLEURISY.—A monograph on this subject, by Dr. Attimont, recently published in Paris, is thus summed up in the Archives Générales of December.

Thoracic puncture alone is rarely followed by cure, except when the pleurisy is recent, and the effusion is rather seropurulent than purulent. It results from this that in purulent pleurisy puncture followed by immediate exclusion is bad practice, and gives only a negative result.

In order to obtain the best effects from surgical intervention, it is necessary to have a continuous flow, especially when the lung is greatly retracted toward the vertebral column. In these circumstances the patency of the opening and the

use of cleansing and antiseptic injections are clearly indicated, and give excellent results.

Neither tubercles nor bronchial fistula of non-tuberculous origin contra-indicate the employment of these therapeutic means, and the operation alone is always followed by a notable amelioration in the condition of the patient.

THE THERAPEUTIC EMPLOYMENT OF COMPRESSED AIR IN ASTHMA AND IN EMPHYSEMA.—At a meeting of the Académie de Médicine, November 20, 1869, Dr. Gent read a paper on the therapeutic employment of compressed air in asthma and in emphysema. According to Dr. G., compressed air is at once a sedative to circulation and to respiration, and a tonic to the bronchial mucous membrane. It is suitable in all maladies of the respiratory passages, laryngeal and bronchial inflammations, chronic pneumonia, catarrh, asthma, emphysema, and whooping-cough. As an excitant of digestion, and by the increased quantity of oxygen it conveys to the blood, it is indicated especially in chloroänæmia. *(Ibid.)*

ETIOLOGY AND TREATMENT OF SIMPLE ULCER.—This is the subject of a paper by C. Gerhardt, Vienna Medical Press. Gastric ulcer, according to the author, may be developed by the action of the gastric juice upon a part of the stomach-wall deprived of its normal supply of blood. This disturbance of circulation may be produced by embole in diseases of the heart, and perhaps also in the tuberculous and in those laboring under bronchial dilatation; by fatty degeneration of the arteries; by blood extravasations in the mucous membrane from violent vomiting; finally, by gangrene from corrosive medicines.

The treatment ought to be directed to the prevention of contact of the gastric juice with the ulcerated surface. The patient should be given almost exclusively milk, eggs, meat, avoiding starchy and saccharine substances, which rapidly cause the formation of acids. Meals should be frequent, in

order to have a continuous action of the gastric juice upon food. A great quantity, especially of aliment that will distend the stomach, should be avoided; it distends the ulcerated base, excites pain, and exposes to perforation.

When there is a great evolution of gas, charcoal should be given. Narcotics should not be used; they do no good, and often derange digestion; but in obstinate vomiting the subcutaneous injection of morphia may be resorted to. Astringents, especially the perchloride of iron, the nitrate of silver, and the subnitrate of bismuth, may be had recourse to in cases attended by acute pain. In debilitated patients attacked with hæmatemesis, the author recommends the frequent use of the perchloride of iron in doses of three or four drops in a glass of water. Nitrate of silver may be given in pill or in solution in the dose of one grain; bismuth and the green oxide of chromium, six to ten grains. Pepsin may be given to those patients who do not bear well in the beginning the milk diet.

Antiseptic Unguent for Small-pox.—Dr. Logan, in the Pacific Medical and Surgical Journal, uses the following: Lamp-black, mercurial ointment, and glycerine, with a small proportion of carbolic acid, either laid directly on the skin with a soft brush, or spread on soft cloth or kid and applied like a mask upon the face and exposed parts. Dr. L. says it does not prevent pitting when the pustules are deeply seated and imbedded in the cutis itself, but it always gives great relief, and generally brings variola to so speedy a termination as to obviate all the train of evils resulting from purulent infection. (See Pacific Medical and Surgical Journal, November.)

Copaiba in Ascites.—Dr. Henry Thompson treated a case of ascites, which had resisted various remedies and had been tapped three times, by copaiba, in doses of fifteen minims every six hours. The improvement was immediate.

The quantity of urine increased from fourteen ounces daily to several pints, and the belly measurement diminished from day to day. The patient was considered cured in about two months. Two cases of ascites with albuminuria were similarly treated by Dr. Liveing. The beneficial action of the remedy manifested itself in increased discharge of urine, and diminution of the ascites and dropsy. Both patients left the hospital with albuminous urine, but otherwise well. Dr. Clapton gave in one case a large number of copaiba capsules with good effect. His experience of the drug, however, went to prove that it only acted occasionally as a diuretic, and that the results were not usually satisfactory. Dr. Greenhow stated that according to his belief the copaiba is least useful in ascites dependent upon heart disease, and most useful in hepatic maladies. (See London Lancet.)

Chloral Hydrate in Delirium Tremens.—Chloral, like most other remedies, varies very considerably in its action with various constitutions. In one case thirty grains were sufficient to compose and give a night's sleep to a most excited and sleepless patient; in another case seventy grains produced no effect; while in yet another ninety grains produced a sleep of only two hours' duration. For delirium tremens Mr. Barnes is disposed to consider sixty grains the minimum dose. *(Ibid.)*

Cure of Femoral Aneurism by Flexion.—Dr. Gurdon Buck presented to the Medical Society of the County of New York a patient cured of femoral aneurism by flexion—a method introduced by Maunoir, of Geneva, in 1858. The case is the first on record of its application to femoral aneurism. Its *modus operandi* is partly by direct compression of the aneurismal tumor, but chiefly by indirect compression of the artery on the cardiac side, through the medium of the tumor. Though restricted in its application to aneurisms

occurring in the flexures of the joints, it is still a most valuable addition to our therapeutical resources; and, being free from the dangers attendant upon other methods, it should, wherever applicable, claim the first trial. (See New York Journal.)

TREATMENT OF PURULENT OPHTHALMIA OF INFANTS.—Dr. A. D. Williams, in his report on ophthalmology to the Ohio State Medical Society, says of the treatment of this disease:

"It is very simple, but not very easy to execute. I prefer by far what may be called the nitrate of silver treatment. I use generally from a 20 to a 40 gr. solution; stronger if the mitigated nitrate is used. I take the child's head between my knees and hold it tight enough to keep it still. I then evert the lids perfectly, which is not often hard to do, wipe or wash the matter away clean, and then with a camel's-hair brush brush the solution over the conjunctiva till it turns decidedly white, and then I wash it thoroughly off with warm water and let the lids down. Give the patient a half gr. solution of atropine with a few grains of alum, and order it dropped into the eyes three or four times a day. I am careful to direct that the eyes be kept clean as possible with warm water. The brushing is to be repeated once a day. It is very necessary to wash the medicine off very perfectly, so as to keep it from going over the surface of the cornea. Graefe advises the use of salt water so as to more thoroughly neutralize the nitrate of silver. We should never scratch the lids much with the brush, else they will bleed profusely. If there is ulceration of the cornea we must be extremely careful not to press the eye-ball in turning the lids, else we may rupture the cornea suddenly and make a part of its contents run out. If this general plan of treatment is correctly followed, a marked improvement will be noticed in two or three days in the cessation of the suppuration and in the diminution of the swelling. In the course of two to five weeks the eyes will be entirely well. As the improvement goes on the treatment should be less severe. After the suppuration has ceased, the sulphate of copper in substance may be used instead of the nitrate of silver. The treatment should be carried on till the granulations disappear. The general result is very satisfactory, as the cases all get well, and that rapidly, if taken before the cornea is involved and faithfully treated. I do not remember ever to have seen

an eye lost if taken before the cornea was ulcerated. In London they rely upon a strong solution of alum dropped into the eyes every half hour. I do not think this is energetic enough, and would be slow to take the great risks to the cornea with that treatment alone. In my judgment the nitrate of silver treatment is by all odds the best."

TREATMENT OF CHRONIC CONSTIPATION.—Dr. Isaac Kay, of Springfield, O., reports that he commences the treatment of chronic constipation by giving a five-grain pill of the inspissated ox-gall every three hours; and it scarcely ever fails in less than twenty-four hours to produce one or two copious stools of natural consistence, and that too without any pain or sickness attending the operation. A five-grain pill taken each morning and evening for several days is sufficient to correct acidity of the stomach, remove ordinary headaches, and regulate all the secretions connected with the digestive system. *(Ibid.)*

SMALL-POX KERATITIS.—The same author claims for the carbolic acid treatment of this stubborn form of keratitis that it is more certain to check the ulceration and make it heal in comparatively a short time—requiring from ten days to six weeks. So long as a small portion of the cornea is clear to begin with, we can promise the patient with considerable certainty that his eye will not be totally lost, which affords him no little consolation. The acid is painful only for an instant; after that it soothes the pain and cools the eye. It also prevents or modifies in some way the resulting opacity of the cornea, both in the small-pox and hypopion keratitis. Cincinnati having lately passed through an epidemic of small-pox, he says he has had a good opportunity to test this treatment, and can recommend it with confidence as the best treatment for this troublesome form of keratitis. *(Ibid.)*

Notes and Queries.

DOSES FOR HYPODERMIC USE.—In answer to the many inquiries made by correspondents concerning the medicines, and their doses, to be used by hypodermic injection, we insert a table prepared by a young physician of this city for a new Visiting-list, just issued here by another physician, also of this place:

ACONITINE (*Aconitia, Off.*)—℞ Aconitiæ, gr. j.; aquæ destillatæ purissimæ, f. drm. ss. Misce et fiat solutio. DOSE—*minimum*, M. ij.=$\frac{1}{120}$ gr.: *maximum*, M. iv.=$\frac{1}{60}$ gr.

ATROPINE (*Atropia, Off.*)—℞ Atropiæ sulphatis, gr. j.; aquæ destillatæ pur., f. drm. ss. Misce et fiat solutio. DOSE—*minimum*, M. ij.=$\frac{1}{120}$ gr.: *maximum*, M. iv.=$\frac{1}{48}$ gr. Best of all medicinal remedies for every kind of pain in pelvic viscera.

CAFFEINE, THEINE.—℞ Caffeinæ, gr. ij.; aquæ destil. bullientis, M. lxxx. Misce et fiat solutio. DOSE—*minimum*, M. 20=$\frac{1}{2}$ gr.: *maximum*, M. 40=1 gr. Neuralgia and alcoholic insomnia.

STRYCHNINE (*Strychnia, Off.*)—℞ Strychniæ sulphatis, gr. ij.; aquæ destillatæ bullientis, oz. j. Misce et fiat solutio. DOSE—*minimum*, M. ij.=$\frac{1}{120}$ gr.: *maximum*, M. iv.=$\frac{1}{60}$ gr. Gastralgia and neuralgia of heart.

MORPHINE (*Morphia, Off.*)—℞ Morphiæ acetatis, gr. v.; acidi acetici, M. j.; aquæ destillatæ bullientis, f. drm. j. Misce et fiat solutio. DOSE—*minimum*, M. j.=$\frac{1}{12}$ gr.: *maximum*, M. vj.=$\frac{1}{2}$ gr. Ten grains to drachm can be dissolved by use of glycerine. Especially useful in delirium tremens and neuralgic pains.

NICOTINE (*Nicotina*).—℞ Nicotinæ, gr. j.; aquæ destill. puriss., f. oz. ss. Misce et fiat solutio. DOSE—*minimum*, M. ij.=$\frac{1}{120}$ gr.: *maximum*, M. iv.=$\frac{1}{60}$ gr. Useful in tetanus.

DIGITALINE (*Digitalia, Off.*)—℞ Digitaliæ, gr. j.; aquæ destill. purissimæ, f. oz. ss. Misce et fiat solutio. DOSE—*minimum*, M. ij.=$\frac{1}{120}$ gr.: *maximum*, M. iv.=$\frac{1}{60}$ gr. Useful in febrile conditions.

CALABAR BEAN (*Physostigma Venenosum*).—℞ Extractum physostigmatos venenosi alcoholici, gr. ij.; aquæ destillatæ purissimæ, drm. ij.; glycerinæ, oz. j. Misce et fiat solutio. DOSE—*minimum*, M. 20=$\frac{1}{15}$ gr.: *maximum*, M. 40=$\frac{1}{8}$ gr. In tetanus.

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* Any of these works may be procured by application to Messrs. John P. Morton and Company, Louisville, Ky.